

IN THE CLAIMS

Please cancel claims 1-75 without prejudice or disclaimer.

Please add claims 76-99 as indicated below.

The listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

---

Claims 1-75 (cancelled)

1 Claim 76 (new) A method for detecting a dead gateway comprising the steps of:  
2 sending a first Transmission Control Protocol (TCP) packet of data from an  
3 application of a sender host to a receiver host through a first gateway;  
4 failing to receive an acknowledgment of received data from said receiver host;  
5 deleting an Address Resolution Protocol (ARP) entry associated with said first  
6 gateway in said sender host; and  
7 sending an ARP request to said first gateway upon deletion of said ARP entry;  
8 wherein if a response to said ARP request is not received from said receiver  
9 host, then said first gateway is inoperative.

1 Claim 77 (new) The method as recited in claim 76 further comprising the step of:  
2 selecting an alternative path to send a packet of data from said sender host to  
3 said receiver host through a second gateway in a routing table in said sender host if  
4 said response to said ARP request is not received from said receiver host.

1 Claim 78 (new) The method as recited in claim 77 further comprising the step of:  
2 marking routes that use said first gateway to a lower priority level from an  
3 original priority level in said routing table in said sender host.

1 Claim 79 (new) The method as recited in claim 78, wherein said routes that use said  
2 first gateway return to their original priority level after a duration of time.

1 Claim 80 (new) The method as recited in claim 77 further comprising the step of:  
2 sending a non-TCP packet of data to said receiver host through said second  
3 gateway using said alternative gateway.

1 Claim 81 (new) The method as recited in claim 77 further comprising the step of:  
2 sending a second TCP packet of data to said receiver host through said second  
3 gateway using said alternative gateway.

1 Claim 82 (new) The method as recited in claim 76, wherein if a response to said ARP  
2 request is received from said receiver host, then said first gateway is operative.

1 Claim 83 (new) The method as recited in claim 82 further comprising the step of:  
2 sending one of a TCP and a non-TCP packet of data through said first  
3 gateway.

A  
1 Claim 84 (new) A computer program product embodied in a machine readable  
2 medium for detecting a dead gateway comprising the programming steps of:  
3 sending a Transmission Control Protocol (TCP) packet of data from an  
4 application of a sender host to a receiver host through a first gateway;  
5 failing to receive an acknowledgment of received data from said receiver host;  
6 deleting an Address Resolution Protocol (ARP) entry associated with said first  
7 gateway in said sender host; and  
8 sending an ARP request to said first gateway upon deletion of said ARP entry;  
9 wherein if a response to said ARP request is not received from said receiver  
10 host, then said first gateway is inoperative.

1 Claim 85 (new) The computer program product as recited in claim 84 further  
2 comprising the programming step of:  
3 selecting an alternative path to send a packet of data from said sender host to  
4 said receiver host through a second gateway in a routing table in said sender host if  
5 said response to said ARP request is not received from said receiver host.

1 Claim 86 (new) The computer program product as recited in claim 85 further  
2 comprising the programming step of:

3 marking routes that use said first gateway to a lower priority level from an  
4 original priority level in said routing table in said sender host.

1 Claim 87 (new) The computer program product as recited in claim 86, wherein said  
2 routes that use said first gateway return to their original priority level after a duration  
3 of time.

1 Claim 88 (new) The computer program product as recited in claim 85 further  
2 comprising the programming step of:

3 sending a non-TCP packet of data to said receiver host through said second  
4 gateway using said alternative gateway.

A ( 1 Claim 89 (new) The computer program product as recited in claim 85 further  
2 comprising the programming step of:

3 sending a second TCP packet of data to said receiver host through said second  
4 gateway using said alternative gateway.

1 Claim 90 (new) The computer program product as recited in claim 84, wherein if a  
2 response to said ARP request is received from said receiver host, then said first  
3 gateway is operative.

1 Claim 91(new) The computer program product as recited in claim 90 further  
2 comprising the programming step of:

3 sending one of a TCP and a non-TCP packet of data through said first  
4 gateway.

1 Claim 92 (new) A system, comprising:  
2 a processor; and

3 a memory unit coupled to said processor, wherein said memory unit is  
4 operable for storing a computer program for detecting a dead gateway;  
5 wherein said processor, responsive to said computer program, comprises:  
6 circuitry for sending a Transmission Control Protocol (TCP) packet of data  
7 from an application of a sender host to a receiver host through a first gateway;  
8 circuitry for failing to receive an acknowledgment of received data from said  
9 receiver host;  
10 circuitry for deleting an Address Resolution Protocol (ARP) entry associated  
11 with said first gateway in said sender host; and  
12 circuitry for sending an ARP request to said first gateway upon deletion of  
13 said ARP entry;  
14 wherein if a response to said ARP request is not received from said receiver  
15 host, then said first gateway is inoperative.

1 Claim 93 (new) The system as recited in claim 92, wherein said processor further  
2 comprises:

3 circuitry for selecting an alternative path to send a packet of data from said  
4 sender host to said receiver host through a second gateway in a routing table in said  
5 sender host if said response to said ARP request is not received from said receiver  
6 host.

1 Claim 94 (new) The system as recited in claim 93, wherein said processor further  
2 comprises:

3 circuitry for marking routes that use said first gateway to a lower priority level  
4 from an original priority level in said routing table in said sender host.

1 Claim 95 (new) The system as recited in claim 94, wherein said routes that use said  
2 first gateway return to their original priority level after a duration of time.

1 Claim 96 (new) The system as recited in claim 93, wherein said processor further  
2 comprises:

3           circuitry for sending a non-TCP packet of data to said receiver host through  
4           said second gateway using said alternative gateway.

1           Claim 97 (new) The system as recited in claim 93, wherein said processor further  
2           comprises:

3           circuitry for sending a second TCP packet of data to said receiver host through  
4           said second gateway using said alternative gateway.

1           Claim 98 (new) The system as recited in claim 92, wherein if a response to said ARP  
2           request is received from said receiver host, then said first gateway is operative.

1           Claim 99 (new) The system as recited in claim 98, wherein said processor further  
2           comprises:

3           circuitry for sending one of a TCP and a non-TCP packet of data through said  
4           first gateway.

---